We Claim:

1. A method of forming an optical fiber from a preform having a glass core surrounded by an outer glass cladding with a coating of material between the core and cladding which strongly interacts with the light in the core to affect either high dispersion, absorption saturation, amplification, Faraday rotation or other similar effects of the said light, said method comprising:

(a) providing a preform having a glass core, a substantially homogeneous coating of a light interactive material over said glass core and a glass cladding over said coating of said light interactive material, with said glasses having an overlapping flow range and said coating material having a flow point which lies below the flow range of said glasses with said flow range being in the range of about 600 - 1500°C; and

(b) heating said preform to an elevated temperature and drawing a fiber from said preform at the flow temperature of said glasses, whereby a fiber is formed having a substantially continuous film of light interactive material formed between said core and cladding throughout the entire length of the fiber.

2. The method of claim 1 in which the light interactive coating comprises an inorganic material.

3. The method of claim 1 is in which the light interactive material is an inorganic material selected from the group consisting of a metal, metal alloy, ceramic, ferrite, magnetic material and a semiconductor.

4. The method of claim 1 in which the light interactive material comprises a metal or a metal alloy.

5. The method of claim 1 in which the light interactive material comprises an AlCu alloy.

16. A method of forming an optical fiber from a preform having a glass core surrounded by an outer glass cladding with a coating of semiconductor material between the core and cladding which strongly interacts with the light in the core to affect either high dispersion, absorption saturation, amplification, Faraday rotation or other similar effects of the said light, said method comprising:

(a) providing a preform having a glass core, a substantially homogeneous coating of a light interactive semiconductor material over said glass core and a glass cladding over said coating of said light interactive semiconductor material, with said glasses having an overlapping flow range and said coating material having a flow point which lies below the flow range of said glasses with said flow range being in the range of about 600 - 1500°C; and

(b) heating said preform to an elevated temperature and drawing a fiber from said preform at the flow temperature of said glasses, whereby a fiber is formed having a substantially continuous film of light interactive semiconductor material formed between said core and cladding throughout the entire length of the fiber.